RESEARCH PAPER

Economics on trial: the use and abuse of economic methods in third party tobacco litigation

Wendy Max, Theo Tsoukalas

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See end of article for authors' affiliations

Correspondence to: Professor Wendy Max, PhD, Institute for Health & Aging, University of California, San Francisco, 3333 California Street, Suite 340, San Francisco, CA 94118, USA; wendy.max@ucsf.edu

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Objective: To analyse how the tobacco industry responded to economic models and methods used in third party payer tobacco litigation that has occurred since 1994.
Methods: Identified 12 third party payer cases and reviewed the transcripts using WinMax qualitative software. Focused on defendant's opening and closing statements, followed by trial testimony, depositions, and plaintiff's transcripts.
Results: Tobacco industry defendants tried to create doubt and confusion about whether or not smoking caused disease and by extension led to health care costs; argued that the economic models used were not legitimate and were not appropriate for estimating the costs incurred by plaintiffs; and criticised the data sources used because they did not consist of the individuals whose health care costs were being sought.
Conclusions: Faced with a new and unprecedented wave of anti-tobacco litigation from third party payers, the tobacco industry tried to adapt strategies that had been used successfully in the past—creation of unfounded doubt and confusion, and manipulation of the discovery process to force plaintiffs to withdraw or concede defeat. The strategies failed because credible economic models of the health care costs of smoking had been developed that were able to quantify the damages to a large group of health care recipients, because plaintiff's attorneys were able to commit significant resources and willing to undertake substantial financial risk to defend their new legal approaches, and because previous arguments related to individual responsibility were deemed irrelevant in third party litigation.

Methods of economic analysis were put to a new test in the courtroom with the spate of tobacco litigation that began in 1994 when the State of Mississippi filed suit against the tobacco industry to recover Medicaid and other indigent health care expenditures incurred as a result of smoking-related illnesses. Tobacco industry lawyers and their expert witnesses tried to argue that the methods used were flawed and that they were based on questionable assumptions. These lawsuits presented new challenges to the industry and the plaintiffs alike, as new legal theories were brought to bear and approaches were used in the courtroom that had not been used in earlier tobacco litigation.

Tobacco litigation has occurred in several waves, beginning with personal injury and wrongful death claims, and later including a number of class action suits.[1] In May of 1994, a new wave of litigation began with the filing of the lawsuit by the Attorney General of Mississippi. Other states followed suit. Eventually, 46 states, Puerto Rico, the US Virgin Islands, American Samoa, the Northern Mariana Islands, Guam, and the District of Columbia signed the resulting Master Settlement Agreement,[2] while the four initial states (Mississippi, Florida, Minnesota, and Texas) settled their cases separately. These suits were later followed by cases filed by several union health funds and private health insurers. In 1999 the federal government also joined in when it filed the largest suit yet, to recover the smoking-related health care costs it has incurred through the Medicare programme.[3] What these suits all had in common was that third party payers were attempting to recover from the tobacco industry the health care expenses resulting from tobacco-related diseases that they were forced to incur and over which they had no control because they were required to provide health care to recipients of the health programmes represented.

In the earlier waves of personal injury and wrongful death litigation, the industry argued repeatedly that smoking was an individual choice and that individuals thus bore the responsibility for their actions and any smoking-related costs that resulted. However, the third party payer suits used the legal principal of equitable recovery, which states that no one should suffer a wrong without a remedy. Moore and Mikhail[1] detail the legal arguments that plaintiffs used for relief:

- restitution for unjust enrichment—that the state conferred a benefit on the industry by not requiring them to bear the full costs of their product and thus the industry was unjustly enriched and the state eligible for restitution
- indemnity—that the state was required to pay for the healthcare of those eligible under state programs and thus the state was entitled to shift the costs to the industry
- common law public nuisance—that the state had the right to mitigate a public nuisance created by the tobacco industry by providing health care for sick smokers
- injunctive relief—that the state was entitled to relief so that it could protect the interest of minors.

Some states also included antitrust violations and unfair trade practices claims in their lawsuits.[1] In these new lawsuits, states and health insurers were not representing their members but were suing on their own behalf. Thus, the arguments of individual choice and responsibility became irrelevant.

Economic analysis and modelling played an important role in the third party payer cases. Each of the plaintiffs provided health care for thousands of people. Thus, large datasets were analysed and econometric models—that is, models that use statistical and mathematical approaches to test economic theories—were developed. These models allowed the plaintiffs to determine their expenditures for health care resulting

Abbreviations: BCBS, Blue Cross/Blue Shield; CPS, Cancer Prevention Study; GAMC, General Assistance Medical Care; TDO/DATTA, Tobacco Documents Online/Deposition and Trial Testimony Archive

Table 1 Cases analysed

Case	Dates	Type of case	Document reference no.	Outcome	Description
Falise v. American Tobacco Company	2000–01	Asbestos	9–13	Hung jury	Case filed in US District Court, NY, on behalf of the Johns Manville Trust health plan to recover over $1.4 billion in additional smoking-related healthcare costs because the defendant concealed the dangerous synergy of asbestos exposure and smoking
National Asbestos Workers Medical Fund v. Philip Morris Inc	2000	Asbestos	14	Case dismissed	Case filed in US District Court, NY to recover additional smoking-related healthcare costs because the defendant concealed the dangerous synergy of asbestos exposure and smoking; no specific monetary damages were requested
Local #17 International Association of Bridge and Iron Workers Insurance Fund v. Philip Morris	1999	Union Trust Fund	15–17	Went to trial. Jury ruled in favour of defendants	Case filed in the US District Court, OH, to recover health care costs associated with smoking. RICO
Northwest Laborers-Employers Health and Security Trust Fund vs. Philip Morris	1998	Union Trust Fund	18	Case dismissed	Case filed in US District Court, WA, to recover additional smoking-related healthcare costs; no specific monetary damages were requested
State of FL v. American Tobacco Co	1997	Attorney General	19	MSA reached before it went to trial	The Attorney General of FL sued the tobacco industry to recover tobacco-related health care costs incurred by the Medicaid programme
State of MN and Blue Cross and Blue Shield of MN v. Philip Morris Inc	1997–98	Attorney General	20–25	Trial, followed by settlement before verdict reached by jury	The Attorney General of MN sued the tobacco industry to recover tobacco-related health care costs incurred by the Medicaid programme, Blue Cross of MN, and the GAMC programme
State of MS v. Philip Morris Inc	5/94–1996	Attorney General	26	MSA reached before it went to trial	The Attorney General of MS sued the tobacco industry to recover tobacco-related health care costs incurred by the state's Medicaid programme and state employee health insurance programme
State of NY v. American Tobacco Co	1997	Attorney General	27	MSA reached before it went to trial	The Attorney General of NY sued the tobacco industry to recover tobacco-related health care costs incurred by the Medicaid programme
State of OK v. RJ Reynolds Tobacco Co		Attorney General	28	MSA reached before it went to trial	The Attorney General of OK sued the tobacco industry to recover tobacco-related health care costs incurred by the Medicaid programme
State of TX v. American Tobacco Co	1997	Attorney General	29	MSA reached before it went to trial	The Attorney General of TX sued the tobacco industry to recover tobacco-related health care costs incurred by the Medicaid programme
State of WA v. American Tobacco Co	1998	Attorney General	30	Went to trial, but MSA reached before trial concluded	The Attorney General of WA sued the tobacco industry to recover tobacco-related health care costs incurred by the Medicaid programme. There was an Antitrust component to this case.
Blue Cross/Blue Shield of NJ v. Philip Morris	2000–01	Private insurer	14, 31–35	Went to trial. Jury found the defendants guilty of deceptive practices and awarded the plaintiff damages of $18 million. Found against the plaintiffs on the charges of racketeering and common law fraud	Case filed in US District Court, Brooklyn, on behalf of 24 BCBS plans to recover health care costs related to smoking. The trial was limited to one plan

BCBS, Blue Cross/Blue Shield; FL, Florida; GAMC, General Aid for Medical Care; MN, Minnesota; MS, Mississippi; MSA, Master Settlement Agreement; NY, New York; OH, Ohio; OK, Oklahoma; RICO, Racketeer Influenced and Corrupt Organizations Act; TX, Texas; WA, Washington State.

from smoking while statistically controlling for other factors that might impact health status and expenditures. The models were developed for the damages phase of the litigation, when it was determined just what liability the tobacco industry should bear. The states that included antitrust violation and unfair trade practices allegations included additional economic analyses to determine what proportion of the smoking-attributable programme expenditures resulted from anti-competitive behaviour on the part of the tobacco industry.

Extensive research on estimating the economic impact of smoking on health expenditures has been done during the last 20 years and the state-of-the art has evolved considerably. New econometric approaches have been developed and others have been refined and applied to the measurement of health care expenditures. The improvement in methods has been further facilitated by the development of powerful desktop computers and the availability of large survey datasets that capture information on both smoking behaviour and health care expenditures. Some of the seminal work in this area as applied to smoking-related costs is described by Warner and colleagues.[4] The plaintiffs worked with some of the expert health economists who have carried out this research[5 6] to estimate damages for each of the lawsuits. The models are sophisticated and complex, and difficult to simplify for presentation to a jury.

This paper examines the role of economic analysis in the third party payer litigation. We look at how the tobacco industry attorneys and experts responded to the models and estimation methods used by the plaintiffs and then discuss how these responses relate to litigation strategies used by the industry over the years. Economic experts and economic arguments were widely used in other tobacco litigation. However, this analysis is limited to third party payer cases and to economic models used to assess smoking-related costs for the purpose of damages estimation. The largest case ever filed, the federal government's Medicare case, is not included in our analysis because it is ongoing as of this writing (16 March 2006). Details as to the status of that case are contained elsewhere in this supplement.[7]

METHODS AND MATERIALS

Case selection

We searched the Tobacco Documents Online/Deposition and Trial Testimony Archive (TDO/DATTA) database as well as our own files to identify third party payer cases. We were limited to reviewing cases for which we were able to obtain the transcripts either electronically or in hard copy. We were able to obtain documents from 12 cases, as shown in table 1. These cases fell into four categories:

- Asbestos-related cases, in which the medical funds of asbestos workers incurred health care costs that they argued were substantially greater than expected because of the increased negative impact of asbestos exposure for smokers
- Union trust fund cases, in which other union funds sought to recover health costs related to smoking which they had incurred
- Attorney general cases, in which the states sued the tobacco industry for health costs they incurred through state-funded programmes, primarily Medicaid, that resulted from smoking-related illness
- Blue Cross/Blue Shield (BCBS), the only one of the three BCBS cases that went to trial. A total of 47 BCBS plans sued the industry for excess health costs they incurred. The plans chose to file their cases in three courts, but only one of these collective cases, the one filed in Brooklyn, New York, went to trial. This case included 24 state plans, but the trial was limited to only one plan as illustrative. The Minnesota Attorney General case also included a BCBS plaintiff.

For each case, we determined when the case was filed and resolved, what the outcome of the case was, the number of documents available per case, the number and type (defence or plaintiff) of economic impact witnesses per case, and the number of documents generated per witness.

Coding scheme

The electronic testimony was coded using WinMax software, allowing us to highlight text segments of interest and assign a code to each one. The overall methods used in the Tobacco Deposition and Trial Testimony Archive (DATTA) project are described elsewhere in this supplement.[8] First, we identified a preliminary list of codes. Then both authors reviewed several transcripts completely to finalise the coding scheme. Several primary codes were further divided into subcodes. Then one of the authors (TT) continued to code documents, meeting with WM every two weeks to review any coded segments in question and agree on how to code them. The themes in the final coding scheme are shown in table 2.

We prioritised our analysis of documents to look first at defence opening and closing statements, followed by trial testimony of defence witnesses, depositions of defence witnesses, plaintiff opening and closing statements, trial testimony of plaintiff witnesses, and depositions of plaintiff witnesses.

We reviewed transcripts from each of the 12 cases, and report here on our analysis of testimony from 13 witnesses

Table 2 Coding scheme

Primary code and subcodes	Description
Causation	Does smoking cause cost?
Economic research in general	Are the methods of economic research legitimate? Are the results of economic analyses credible?
Analysis of cofactors and/or confounders	Does the model take confounding and cofactors into account appropriately?
Issue framing	Is the issue a medical one or a statistical one?
Death benefit	Does the model take into account the savings to health insurance, social security, and pension plans that result from premature death from smoking-related illness? This was a way of trying to cast the model in a framework that considers tobacco as contributing to an overall benefit rather than a cost
• Lifetime *v* annual costs	Is the model cast in a lifetime cost framework thus considering savings that accrue from early death?
• Incidence *v* annual costs	(Same argument as above, but with different terminology.) Is the model cast in an incidence-based cost framework, thus considering savings that accrue from early death?
Sample selection	Did the models use the appropriate dataset?
• CPS II	Any discussion of the merits of the CPS II data
Scientific judgment	What role did subjective judgment play in development of the models?
Use of statistical models	
• Missing data	Was missing data handled appropriately?
• Statistical reliability/ validity	Were the models used statistically reliable and valid?
• Statistical science	Is the science of statistics a legitimate one?
• Statistical significance	Were the variables of interest statistically significant?
• Omitted variables	Were any variables that should have been included omitted from the models?

CPS, Cancer Prevention Survey.

and five opening and closing statements found in 29 documents.[9–37] Included in the final analysis are testimony from both defence and plaintiff's witnesses, defence and plaintiff's opening statements, and defence closing statements. In addition, we included an expert report from a key economics experts for whom transcripts were not available.[38] Themes were found to be repeated after reading this many documents. After the documents were coded, we reviewed all segments coded with each topic to look at how frequently the topic was mentioned and the way in which it was presented. In this way, we were able to identify concepts and topics that were mentioned repeatedly across many cases, witnesses, and types of transcripts.

RESULTS

Three overarching themes emerged from the analysis of the transcripts.

Theme 1: Creation of doubt and confusion about whether or not smoking causes disease and by extension leads to health care costs

Tobacco industry attorneys and experts alike attempted to create confusion about whether or not smoking really causes disease and leads to health care expenditures. In order to make this point, industry attorneys and expert witnesses tried to make the economic models used to estimate health care costs seem irrational and meaningless. For example, in the BCBS case, a defence expert testified at trial that the plaintiff's model attributes 10% of the cost of car crashes to smoking, and therefore should not be considered credible:

> …the model is not discriminating as it is claimed and supposed to be able to do. It's allowing elevated levels of car accidents to sneak past its barrier, where it is supposed to be throwing out things, except things that are caused by smoking. These are not caused by smoking and they are going through.[37]

However, a number of studies have shown that smokers have higher rates of motor vehicle injuries[39–41]; thus this cost attribution is legitimate. This issue, while trivialised by industry defendants, touches on the larger issue of correlation versus causation. In the simplest mortality ratio models, the list of diseases considered as smoking related is limited to those for which there is evidence of causation. Econometric approaches allow one to be more inclusive and to consider not only diseases that are caused by smoking, but also instances where health costs may be higher for smokers for conditions not caused by smoking. For example, a smoker may be at increased risk of anaesthesia complications and thus have greater surgical costs.[42] In some of the earlier econometric models, no distinction was made between smoking-caused and smoking-related costs. However, in the later cases, estimates were presented separately[43] and the industry defendants attempted to use examples of diseases that are not smoking-caused to undermine the credibility of the models.

In order to facilitate the strategy of doubt and confusion, industry attorneys acknowledged up front that smoking results in poor health and health care costs, but later tried to present evidence that there were no increased healthcare costs to the programmes in question. Here are some comments from the opening statement made by a defence attorney for Philip Morris in the Minnesota Attorney General case:

> The state of Minnesota has known and has taught its citizens for a long, long time about the health hazards of smoking and the health-care costs associated with smoking.[23]

Then a few minutes later the same defence attorney stated:

> … the evidence in this case will show the state and Blue Cross cannot prove any increased health-care costs in these three specific programs as the result of smoking.[23]

While the latter statement addresses a subtle legal point of proof, the jury would likely find the statements contradictory and confusing.

Industry experts argued that only randomised trials can truly prove that smoking causes disease. Under cross-examination in the BCBS case, an industry expert referring to the causation of lung cancer by smoking, indicated that ''there is no statistical proof of that because for that you need [a] randomized experiment''.[37]

This strategy is a variation on a theme that the industry has used for many years. Moore and Mikhail suggest that one of the key objectives of Center for Tobacco Research-sponsored research was demonstrating ''that questions regarding tobacco use and health are far from being resolved''.[1] In the third party litigation, the industry merely took this approach to the next level by trying to extend the confusion to the relationship between smoking and costs. That is, industry attorneys and expert witnesses attempted to argue that the impacts of tobacco use on health are not really known, and we therefore cannot know that tobacco use causes excessive health-related costs.

Theme 2: Economic models and econometric techniques are not valid

A second theme that emerged was that the plaintiff's economic models and the econometric techniques they employed to estimate damages from tobacco use were not valid. Tobacco industry attorneys and their expert witnesses criticised every possible aspect of the models and held the research up to a standard that exceeds what would be posed by the peer reviewers of most scholarly journals. A representative criticism of the plaintiff's models appeared in the defence closing statement of an attorney for RJ Reynolds in the Minnesota Attorney General case:

> The final damage estimates model is wrong because…of bias, unreliability, bloated estimates, ignoring information, failing to compare like to like, based on general population extrapolations instead of public aid comparison, because it makes up data…[25]

Several tactics were used to criticise the models. One strategy was to hire statisticians and/or economists who would focus on one particular aspect of the model and present criticisms of the estimates compared to the theoretically ideal model. A second tactic was to try to convince the jury that the models were so complex that they were something akin to black magic. A defence attorney in the Minnesota Attorney General case told the jury that ''…they did a statistical projection and shazam, 87 million dollars''.[24]

The tobacco industry was experienced at defending itself against individual claims where they could respond by shedding doubt on whether tobacco use alone was responsible for an individual's excess health care costs. However, economic models of the health care costs of smoking had been developed and refined that were able to quantify the damages to a large group of health care recipients. These models had been published in the peer-reviewed literature and gained acceptance in academic, policy, and legal circles.[4–

[6 42 44] Though the models were criticised in great detail, the general approach to estimating the health care implications of tobacco use has endured, as evidenced by the many publications that have appeared in the peer-reviewed literature after the litigation ended.

The defendants had a back-up plan. They were prepared to argue that models of the health care costs of smoking should have framed the issue differently. Rather than estimating annual smoking-related costs, the models should have considered lifetime costs. This would allow the tobacco industry to argue that because smokers die earlier, they actually generate a net savings in health care costs, social security payments, and pension benefits. This argument has been described as the ''death benefit'', and is predicated on accepting the feasibility of developing economic models that allow one to quantify health care costs. In our review of the documents, there was no indication that this theme was ever presented before a jury, though it was discussed in some early depositions.[28] However, this lack of inclusion is largely because most judges ruled that it was not to be presented at trial.[42] Had these arguments been offered, they would likely have been countered with evidence that a majority of smokers who die prematurely nonetheless survive to age 65 and thus may represent a savings to the social security programme, but not to the Medicaid or health and trust funds involved in the cases we reviewed.

Theme 3: Criticism of the data sources as not appropriate

Those representing the tobacco industry argued that the data sources used to estimate the economic cost models were not appropriate. Most of the models presented by the plaintiff's experts used national data for model development and then adapted the model with programme-specific data to apply to the state programme of interest. The approaches used varied. Max[28] used a mortality ratio approach in her work for a number of states. In this approach, the proportion of smoking-related expenditures for an illness is assumed to be the same as the proportion of smoking-related deaths for that illness. Max used national mortality ratios along with state-specific smoking prevalence rates for low income people and state-specific Medicaid expenditures to estimate smoking-related costs for state Medicaid programmes. Harris[38] estimated smoking-related costs for Florida by reviewing published literature to determine that ever smokers spend 10–20% more on health care than non-smokers. He applied this to Florida Medicaid expenditures to develop an estimate of smoking-related expenditures. Econometric models were used by Leonard Miller,[5] Vincent Miller,[6] and Harrison.[36] The models differ in many ways, but used a common approach to incorporate state and programme specific data into national models to develop smoking-related cost estimates for Medicaid (and in some cases other state-specific) programmes. Models were developed using national data on smoking status and health expenditures. Thus, the relationship between health expenditures and smoking status, insurance status, health status, socioeconomic characteristics, and other relevant covariates was modelled at the national level. The programme-specific values of these variables were then plugged into the models to estimate smoking-attributable fractions which were applied to the total programme expenditures. Finally, programme-specific smoking-related expenditures were determined.

The tobacco industry attorneys and experts indicated that only the data on actual smokers represented in a particular suit would be relevant to the analyses. Tobacco industry attorneys expressed continual frustration that these individuals were not being interviewed. As stated in the defence opening statement in the Minnesota Attorney General case:

> They are not going to bring in one single Medicaid recipient, one single GAMC [General Assistance Medical Care] recipient. One Blue Cross insured, one smoker on these programs or not. Not one.[23]

This argument is another attempt to harken back to the usual industry defence of individual responsibility. Tobacco industry attorneys were frustrated by their inability to interview actual smokers. If they could interview individuals, they could pursue one of two familiar strategies: either try to convince the jury that the individual had made his or her own choice to smoke and thus had to be responsible for that decision; or probe for other factors that might have influenced a particular individual's excessive health care costs.

In fact, the reason for using statistical models based on large numbers of observations is that in the aggregate, one can control for other risk factors and behaviours and see a pattern of behaviour that cannot be observed when studying only individual smokers. Many of the econometric models that have been developed estimate smoking-related health care expenditures by controlling for socioeconomic factors (age, race/ethnicity, geographic region, marital status, education, health insurance coverage, and family income) and other risk behaviours (obesity and seatbelt use).[5] Furthermore, it was simply not possible to find, let alone interview, the tens of thousands of recipients in any of the Medicaid or other programmes involved in the suit. In many of the suits, damages were sought for those who were covered during the last 35 years (for example, the Mississippi, New York, Oklahoma, and Texas Attorney General cases). Many of these people would have long ago left the area or died. Thus, this request to interview programme participants was an example of the industry's historical litigation strategy of wearing the opponent down by prolonging the discovery process in a way that makes it extremely costly and burdensome for the plaintiffs.[1]

Industry attorneys and experts were particularly critical of the Cancer Prevention Study (CPS) II data that were used in many of the third party payer cases to determine smoking prevalence over time among different population subgroups. They argued that it did not include Minnesota Medicaid recipients or asbestos workers or whatever specific group was included in the lawsuit being presented. However, at the same time they did not suggest that the risk factors that were determinants of smoking status or health, such as income level, other medical conditions, age, and gender, were not included in the study. The CPS-II is a massive study undertaken by the American Cancer Society. It includes 1.2 million persons in 50 states, with ongoing follow-up data collection for the people enrolled beginning in 1982. The study was designed to collect data on risk factors that might influence cancer risk. It remains the most credible dataset for the analysis of various aspects of cancer, including mortality, and is used by the federal government and many other researchers for this purpose. As acknowledged by a defence witness in the Falise case, one can use this survey to look at the interrelationships between various characteristics:

> You can study the CPS-II data and determine relationships that exist within that data. So far so good. Say more exercise, less heart disease, how that relates. That's all fine so far.[10]

The witness went on to say that you could not then generalise results from analyses of this survey to any subpopulations in the US population who were not represented in the data. For example, if Minnesota Medicaid

recipients could not be identified in the survey, then the results could not be applied to that group. Thus, even if models were developed that looked at the characteristics of Minnesota Medicaid recipients that related to their health status and expenditures, such as income level, access to care, and demographic characteristics, the models could not be applied to this group because they could not be identified from the data. However, they do not suggest that the relationship between exercise and heart disease is different among those who could not be identified in the survey, and that is the relevant factor here.

The same witness, testifying in the Bridge and Ironworkers Insurance Fund case, seemed to agree that the factors of importance were included in the CPS-II data:

> Question: And did you examine the CPS II data to determine from a purely statistical standpoint whether or not the list of, I guess it was about two dozen factors that we looked at were in fact associated statistically with a higher incidence of mortality?
> Answer: Yes. I looked at the data itself and I also looked at published literature to verify that everything on this list is a risk factor for mortality.[15]

DISCUSSION

The third party payer suits posed new challenges to the tobacco industry. The tobacco industry was not familiar with defending itself against economic models and econometric approaches estimated using large national and state level datasets. Rather, they were experienced with defending themselves against charges brought on behalf of individual smokers. The industry responded to the third party payer litigation by activating its time-tested approach—create doubt and controversy where none exists. In this case, they questioned whether smoking caused disease and a resulting excess in health care costs.

To facilitate this approach, industry attorneys and their expert witnesses attacked the plaintiffs' models in two areas. First, they critiqued the legitimacy and applicability of the models. They attempted to shed doubt on whether economic models were a legitimate tool for addressing the question of what smoking-related health care costs are, and they tried to weaken the very bases on which statistical approaches rest.

Second, industry attorneys and their expert witnesses criticised the datasets used to estimate the plaintiffs' models. In doing so, they questioned the appropriateness of reaching conclusions from studies that did not include the actual victims whose health care costs the plaintiffs' were seeking to recover. By suggesting that individual health care recipients needed to be interviewed, the industry attempted to use another of their historical tactics—stalling and wearing down their opponents through lengthy and costly discovery.

Another tactic that the tobacco industry defendants used was to argue that regardless of the smoking-attributable costs, they could not be held liable because their misconduct had not been proven.[43] This issue is outside the scope of this paper, but is another area where economic analysis was brought to bear.[38]

Conclusion

When the tobacco industry found itself in 1994 facing a new and unprecedented wave of anti-tobacco litigation from third party payers, they tried to adapt strategies that had been used successfully in the past—creation of unfounded doubt and confusion, and manipulation of the discovery process to force plaintiffs to withdraw or concede defeat. However, these strategies proved to be of limited use at best, as indicated by the $206 billion Master Settlement Agreement reached by industry representatives and the attorneys general in 1998.

What this paper adds

The tobacco industry has long been known to employ strategies of obfuscation, creating confusion and uncertainty, and wearing down their opponents by forcing them to incur extraordinary costs and time delays during the course of litigation. However, no one has previously examined whether or not these strategies were used in the newest wave of tobacco litigation in which the states and other third party payers sued for the recovery of costs resulting from tobacco-related illness.

This study reviews transcripts from third party payer litigation that has occurred since 1994, and looks specifically at how the industry responded to economic models and methods used in these cases. We find that the old strategies were adapted for the new wave of litigation, but proved to be of limited use against the plaintiffs' use of new legal approaches supported by state-of-the-art econometric approaches.

The industry's previously successful strategies failed for several reasons. First, the plaintiff's attorneys were able to commit significant resources and willing to undertake substantial financial risk to defend their new legal approaches. Second, previous arguments related to individual responsibility were deemed irrelevant in the new wave of litigation. Instead of individual plaintiffs seeking to recover individual losses, third party payers were seeking to recover costs they had incurred for the tens of thousands of individual health care recipients they served. Third, economic models of the health care costs of smoking had been developed that were able to quantify damages to a large group of health care recipients. While these models were evaluated and critiqued in great detail, the legitimacy of the underlying modelling methods to determine damages for health care recipients was not undermined and researchers continue to publish studies using these approaches. The industry's only remaining defence, that economic models should consider lifetime implications of smoking and the death benefit which results from premature mortality, was disallowed as a courtroom tactic. In short, in the newest wave of litigation against the tobacco industry, the industry attempted to adapt strategies that had proven successful in the past, but these proved to be of limited value against the plaintiffs' new legal strategies buttressed by economic models using sophisticated econometric techniques.

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Authors' affiliations

W Max, Institute for Health & Aging, University of California, San Francisco, USA
T Tsoukalas, University of California, San Francisco, USA

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